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Cys Asp Lys Ile Val Glu Thr Lys Gly Ser Ala Gly Lys Arg Asn Gly 65 70 75 80

Arg Val Ser Ile Arg Asp Ser Pro Ala Asn Leu Ser Phe Thr Val Thr 85 90 95

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<213> Homo sapiens

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- Cys Arg Pro Pro Gln Ile Phe Leu Cys Asp Lys Ile Val Glu Thr Lys 50 55 60
- Gly Ser Ala Gly Lys Arg Asn Gly Arg Val Ser Ile Arg Asp Ser Pro 65 70 75 80
- Ala Asn Leu Ser Phe Thr Val Thr Leu Glu Asn Leu Thr Glu Glu Asp 85 90 95
- Ala Gly Thr Tyr Trp Cys Gly Val Asp Thr Pro Trp Leu Arg Asp Phe
 100 105 110
- His Asp Pro Val Val Glu Val Glu Val Ser Val Phe Pro Ala Ser Thr 115 120 125
- Ser Met Thr Pro Ala Ser Ile Thr Ala Ala Lys Thr Ser Thr Ile Thr 130 135 140
- Thr Ala Phe Pro Pro Val Ser Ser Thr Thr Leu Phe Ala Val Gly Ala 145 150 155 160
- Thr His Ser Ala Ser Ile Gln Glu Glu Thr Glu Glu Val Val Asn Ser 165 170 175
- Gln Leu Pro Leu Leu Leu Ser Leu Leu Ala Leu Leu Leu Leu Leu Leu 180 185 190
- Val Gly Ala Ser Leu Leu Ala Trp Arg Met Phe Gln Lys Trp Ile Lys 195 200 205
- Trp Ile Lys Ala Gly Asp His Ser Glu Leu Ser Gln Asn Pro Lys Gln 210 215 220
- Ala Ala Thr Gln Ser Glu Leu His Tyr Ala Asn Leu Glu Leu Leu Met 225 230 235 240

Trp Pro Leu Gln Glu Lys Pro Ala Pro Pro Arg Glu Val Glu Val Glu 245 250 255

Tyr Ser Thr Val Ala Ser Pro Arg Glu Glu Leu His Tyr Ala Ser Val 260 265 270

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Trp Cys Arg Gly Gln Tyr Asp Thr Ser Cys Glu Ser Ile Val Glu Thr 50 60

Lys Gly Glu Glu Lys Val Glu Arg Asn Gly Arg Val Ser Ile Arg Asp 65 70 75 80

His Pro Glu Ala Leu Ala Phe Thr Val Thr Met Gln Asn Leu Asn Glu 85 90 95

Asp Asp Ala Gly Ser Tyr Trp Cys Lys Ile Gln Thr Val Trp Val Leu 100 105 110

Asp Ser Trp Ser Arg Asp Pro Ser Asp Leu Val Arg Val Tyr Val Ser 115 120 125

Pro Ala Ile Thr Thr Pro Arg Arg Thr Thr His Pro Ala Thr Pro Pro 130 135 140

Ile Phe Leu Val Val Asn Pro Gly Arg Asn Leu Ser Thr Arg Glu Val 145 150 155 160

Leu Thr Gln Asn Ser Gly Phe Arg Leu Ser Ser Pro His Phe Leu Leu 165 170 175 Val Val Leu Leu Lys Leu Pro Leu Leu Ser Met Leu Gly Ala Val 180 185 190

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<211> 174

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<213> Homo sapiens

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Cys 65	Asn	Ile	Leu	Val	Lys 70	Thr	Asn	Gly	Ser	Glu 75	Gln	Glu	Val	Lys	Lys 80		
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Thr	Glu	Arg 115	Pro	Gly	Ile	Asp	Leu 120	Gly	Val	Lys	Val	Gln 125	Val	Thr	Ile		
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<213> Homo sapiens

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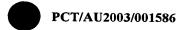
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Cys Arg Gln Pro Cys Leu Pro Ile Trp His Glu Met Val Glu Thr Gly 50 55 60

Gly 65	Ser	Glu	Gly	Val	Val 70	Arg	Ser	Asp	Gln	Val 75	Ile	Ile	Thr	Asp	His 80	
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Asp	Ala	Gly	Lys 100	Tyr	Arg	Cys	Gly	Ile 105	Ala	Thr	Ile	Leu	Gln 110	Glu	Asp	
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Pro 145	Thr	Arg	Pro	Ser	Gln 150	Cys	Gln	Gly	Ser	Leu 155	Pro	Ser	Ser	Thr	Cys 160	
Phe	Leu	Leu	Leu	Pro 165	Leu	Leu	Lys	Val	Pro 170	Leu	Leu	Leu	Ser	Ile 175	Leu	•
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<212> PRT

<213> Homo sapiens

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<211> 287

<212> PRT

<213> Homo sapiens

<400> 14

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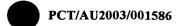
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Arg Gly Ser Leu Thr Val Gln Cys Val Tyr Arg Ser Gly Trp Glu Thr 35 40 . 45

Tyr Leu Lys Trp Trp Cys Arg Gly Ala Ile Trp Arg Asp Cys Lys Ile 50 55 60

Leu Val Lys Thr Ser Gly Ser Glu Gln Glu Val Lys Arg Asp Arg Val 65 70 75 80

Ser Ile Lys Asp Asn Gln Lys Asn Arg Thr Phe Thr Val Thr Met Glu



Asp Leu Met Lys Thr Asp Ala Asp Thr Tyr Trp Cys Gly Ile Glu Lys
100 105 110

Thr Gly Asn Asp Leu Gly Val Thr Val Gln Val Thr Ile Asp Pro Ala 115 120 125

Pro Val Thr Gln Glu Glu Thr Ser Ser Pro Thr Leu Thr Gly His 130 135 140

His Leu Asp Asn Arg His Lys Leu Leu Lys Leu Ser Val Leu Leu Pro 145 150 155 160

Leu Ile Phe Thr Ile Leu Leu Leu Leu Val Ala Ala Ser Leu Leu Leu 165 170 175

Ala Trp Arg Met Met Lys Tyr Gln Gln Lys Gly Glu Arg Thr Trp Val 180 185 190

Leu Gln Pro Leu Glu Gly Asp Leu Cys Tyr Ala Asp Leu Thr Leu Gln
195 200 205

Leu Ala Gly Thr Ser Pro Gln Lys Ala Thr Thr Lys Leu Ser Ser Ala 210 215 220

Gln Val Asp Gln Val Glu Val Glu Tyr Val Thr Met Ala Ser Leu Pro 225 230 235 240

Lys Glu Asp Ile Ser Tyr Ala Ser Leu Thr Leu Gly Ala Glu Asp Gln 245 250 255

Glu Pro Thr Tyr Cys Asn Met Gly His Leu Ser Ser His Leu Pro Gly 260 265 270

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Glu Ala Leu Lys Gly Pro Lys Glu Ile Ser Gly Phe Glu Gly Asp Thr 20 25 30

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Tyr Trp Cys Arg Gln Gly Gly Ile Leu Val Ser Arg Cys Gly Asp Ile 50 60



- Val Tyr Ala Asn Gln Asp Gln Glu Val Thr Arg Gly Arg Met Ser Ile 65 70 75 80
- Arg Asp Ser Pro Gln Glu Leu Ser Met Thr Val Ile Met Arg Asp Leu 85 90 95
- Thr Leu Lys Asp Ser Gly Lys Tyr Trp Cys Gly Ile Asp Arg Leu Gly 100 105 110
- Arg Asp Glu Ser Phe Glu Val Thr Leu Ile Val Phe Pro Gly Ser Ser 115 120 125
- Arg Pro Val Val Trp Leu Pro Leu Thr Thr Pro Gln Asp Ser Arg Ala 130 135 140
- Val Ala Ser Ser Val Ser Lys Pro Ser Val Ser Ile Pro Met Val Arg 145 150 155 160
- Met Met Ala Pro Val Leu Ile Leu Leu Ser Leu Leu Leu Ala Ala Gly 165 170 175
- Leu Ile Ala Phe Gly Ser His Met Leu Arg Trp Arg Lys Lys Ala Trp 180 185 190
- Leu Ala Thr Glu Thr Gln Lys Asn Glu Lys Val Tyr Leu Glu Thr Ser 195 200 205
- Leu Pro Gly Asn Gly Trp Thr Thr Glu Asp Ser Thr Ile Asp Leu Ala 210 215 220
- Val Thr Pro Glu Cys Leu Arg Asn Leu Asn Pro Ser Ala Val Pro Ser 225 230 235 240
- Pro Glu Thr Gln Asn Leu Ser Gln Ser Thr Glu Glu Glu Glu Ala Ala 245 250 255
- Arg Ser Leu Asp Asp Asp Lys Glu Asp Val Met Ala Pro Pro Pro Leu 260 265 270



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Glu Glu Lys Phe Lys Thr Lys Asp Lys Tyr Trp Cys Arg Gly Ser Leu 50 60

Lys Val Leu Cys Lys Asp Ile Val Lys Thr Ser Ser Ser Glu Glu Ala 65 70 75 80

Arg Ser Gly Arg Val Thr Ile Arg Asp His Pro Asp Asn Leu Thr Phe 85 90 95

Thr Val Thr Tyr Glu Ser Leu Thr Leu Glu Asp Ala Asp Thr Tyr Met 100 105 110

Cys Ala Val Asp Ile Ser Leu Phe Asp Gly Ser Leu Gly Phe Asp Lys 115 120 125

Tyr Phe Lys Ile Glu Leu Ser Val Val Pro Ser Glu Asp Pro Gly Pro 130 135 140

Thr Leu Glu Thr Pro Val Val Ser Thr Ser Leu Pro Thr Lys Gly Pro 145 150 155 160

Ala Leu Gly Ser Asn Thr Glu Asp Arg Glu His Asp Tyr Ser Gln 165 170 175

Gly Leu Arg Leu Pro Ala Leu Leu Ser Val Leu Ala Leu Leu Leu Phe 180 185 190



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Trp Ser Leu Arg Glu Glu Pro Val Leu Pro Ser Gln Val Glu Val Val 245 250 255	
Glu Tyr Ser Thr Leu Ala Leu Pro Gln Glu Glu Leu His Tyr Ser Ser 260 265 270	
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420

480

540

600

660

711

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Thr Val Gln	Cvs Ara Tu	r Ser Ser	. A~~ T	C) - m-		_
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Trp Cys Arg	Glv Ala Se	r Tro Ser	Thr Cve	Ara Val	T a.v. T] -	7
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Thr Gly Ser	Glu Lys Gl	u Thr Lys	Ser Glv	Ara Leu	Ser Ile	Ara Ass
65	70	-	,	75		80
Asn Gln Lys	Asn His Se	r Phe Gln	Val Thr	Met Glu	Met Leu	Arg Gln
	85		90			95
Asn Asp Thr	Asp Thr Ty	Trp Cys	Gly Ile	Glu Lys	Phe Gly	Thr Asp
•	100		105		110	

Arg Gly Thr Arg Val Lys Val Asn Val Tyr Phe Gly His Met Gln Thr 115 120 125

420

480

Phe Phe Ser Ser Ala Ala Thr Leu Thr Pro Glu Arg Ala Ala Glu Met 130 135 140 Trp Val Lys Ile Pro Cys Arg Leu Leu Ile Asn Phe Pro Gly Pro Leu 145 150 155 Trp Thr Ala Val Gln Thr Trp Cys Leu Leu Thr Cys Arg Arg Gly Leu 165 170 175 Glu Ala Ser Leu Val Gly Ala Phe Val Gly Gly Leu Met Gln Val Pro 180 185 Ser Cys Ser Leu Ala Val Ala Ile Phe Thr Phe Val Leu Thr Leu Thr 195 200 205 Pro Pro Ser Ser Gln Glu Ala His Ser Thr Pro Ser Ser His Ser Ala 210 215 220 Pro Val Ala Ser Lys Glu Glu Met Asn Arg Leu Phe 225 230 <210> 21 <211> 819 <212> DNA <213> mouse <400> 21 aggaagtagc tcagagtgca aaggaagcag ataagaaaaa aacacatgga gagaacttga 60 acaagaaggt ggttgcctgg gctctgttac acacatctgg attccagcag cgacctggag 120 ttttctggag acagtaccca gtgaggcagg aggatgaggc tatgtgcagg tctgctcctt 180 ctctgcttcc aaggttgttt gtctctgacg ggccctggct ctgtgtctgg ctacgtagga 240 ggctctctcc gtgtgcagtg tcaatatagt ccatcatata agggctatat gaaatactgg 300 tgccgaggac cgcatgacac gacgtgtaaa actattgtag aaaccgacgg aagtgagaaa 360 gaaaagagga gtggcccagt gtccatcaga gaccatgctg cgaactccac catcacagtg

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<213> mouse

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Ser Leu Thr Gly Pro Gly Ser Val Ser Gly Tyr Val Gly Gly Ser Leu 20 25 30

Arg Val Gln Cys Gln Tyr Ser Pro Ser Tyr Lys Gly Tyr Met Lys Tyr 35 40 45

Trp Cys Arg Gly Pro His Asp Thr Thr Cys Lys Thr Ile Val Glu Thr 50 55 60

Asp Gly Ser Glu Lys Glu Lys Arg Ser Gly Pro Val Ser Ile Arg Asp 65 70 75 80

His Ala Ala Asn Ser Thr Ile Thr Val Ile Met Glu Asp Leu Ser Glu 85 90 95

Asp Asp Ala Gly Ser Tyr Trp Cys Lys Ile Gln Thr Ser Phe Ile Trp 100 105 110

Asp Ser Trp Ser Arg Asp Pro Ser Val Ser Val Arg Val Asn Val Phe 115 120 125

Pro Val Asn Ser Gly Gln Asn Leu Arg Ile Ser Thr Asn Val Met Phe 130 135 140

Ile Phe Gln Leu Trp Ser Leu Leu Ser Ser Ile Gln Phe Gln Val Leu 145 150 155 160

Val Phe Leu Lys Leu Pro Leu Phe Leu Ser Met Leu Cys Ala Ile Phe 165 170 175

Trp Val Asn Arg Leu 180

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2487

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Glu Val Thr Gln Ser Arg Pro His Thr Arg Ser Leu Leu Ser Ser Ile 165 170 175

Tyr Phe Leu Leu Met Val Phe Val Glu Leu Pro Leu Leu Ser Met 180 185 190

Leu Ser Ala Val Leu Trp Val Thr Arg Pro Gln Arg Cys Phe Gly Arg 195 200 205

Gly Glu Asn Asp Leu Val Lys Thr His Ser Pro Val Ala 210 215 220

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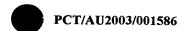
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Met 1	His	Leu	Ser	Leu 5	Leu	Val	Pro	Phe	Leu 10	Phe	Trp	Ile	Thr	Gly 15	Cys
Cys	Thr	Ala	Glu 20	Asp	Pro	Val	Thr	Gly 25	Pro	Glu	Glu	Val	Ser 30	Gly	Gln
Glu	Gln	Gly 35	Ser	Leu	Thr	Val	Gln 40	Cys	Arg	Tyr	Thr	Ser 45	Glý	Trp	Lys
Asp	Tyr 50	Lys	Lys	Tyr	Trp	Cys 55	Gln	Gly	Val	Pro	Gln 60	Arg	Ser	Cys	Lys
Thr 65	Leu	Val	Glu	Thr	Asp 70	Ala	Ser	Glu	Gln	Leu 75	Val	Lys	Lys	Asn	Arg 80
Val	Ser	Ile	Arg	Asp 85	Asn	Gln	Arg	Asp	Phe 90	Ile	Phe	Thr	Val	Thr 95	Met
Glu	Asp	Leu	Arg 100	Met	Ser	Asp	Ala	Gly 105	Ile	Tyr	Trp	Cys	Gly 110	Ile	Thr

Lys Val Pro Thr Met Pro Pro Ile Thr Ser Thr Thr Thr Ile Phe Thr 115 120 125

Val Thr Thr Thr Val Lys Glu Thr Ser Met Phe Pro Thr Leu Thr Ser 130 135 140

Tyr Tyr Ser Asp Asn Gly His Gly Gly Gly Asp Ser Gly Gly Glu 145 150 155 160

Asp Gly Val Gly Asp Gly Phe Leu Asp Leu Ser Val Leu Leu Pro Val 165 170 175

Ile Ser Ala Val Leu Leu Leu Leu Leu Leu Val Ala Ser Leu Phe Ala 180 185 190

Trp Arg Met Val Arg Arg Gln Lys Lys Asp Leu Ser Leu Lys Gln Pro 195 200 205

Arg Thr Ser Pro Gly Ser Ser Trp Lys Lys Gly Ser Ser Met Ser Ser 210 220

Ser Gly Lys Asp His Gln Glu Glu Val Glu Tyr Val Thr Met Ala Pro 225 230 235 240

Phe Pro Arg Glu Glu Val Ser Tyr Ala Ala Leu Thr Leu Ala Gly Leu 245 250 255

Gly Gln Glu Pro Thr Tyr Gly Asn Thr Gly Cys Pro Ile Thr His Val 260 265 270

Pro Arg Thr Gly Leu Glu Glu Glu Thr Thr Glu Tyr Ser Ser Ile Arg 275 280 285

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Trp Lys Asp Tyr Lys Lys Tyr Trp Cys Arg Gly Ala Tyr Trp Lys Ser 35 40 45

Cys Glu Ile Leu Val Glu Thr Asp Ala Ser Glu Gln Leu Val Lys Glu
50 55 60

Asn Arg Val Ser Ile Arg Asp Asp Gln Thr Asp Phe Ile Phe Thr Val 65 70 75 80

Thr Met Glu Asp Leu Arg Met Ser Asp Ala Asp Ile Tyr Trp Cys Gly 85 90 95

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Asp Pro

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Met Pro Leu Leu Thr Leu Tyr Leu Leu Phe Trp Leu Ser Gly Tyr
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Tyr Leu Lys Trp Trp Cys Arg Gly Ala Ile Trp Arg Asp Cys Lys Ile 50 55 60

Leu Val Lys Thr Ser Gly Ser Glu Gln Glu Val Lys Arg Asp Arg Val 65 70 75 80

Ser Ile Lys Asp Asn Gln Lys Asn Arg Thr Phe Thr Val Thr Met Glu 85 90 95

Asp Leu Met Lys Thr Asp Ala Asp Thr Tyr Trp Cys Gly Ile Glu Lys 100 105 110

Thr Gly Asn Asp Leu Gly Val Thr Val Gln Val Thr Ile Asp Pro Ala 115 120 125

Pro Val Thr Gln Glu Glu Thr Ser Ser Ser Pro Thr Leu Thr Gly His 130 $$ 135 $$ 140

His Leu Asp Asn Arg His Lys Leu Leu Lys Leu Ser Val Leu Leu Pro 145 150 155 160

Leu Ile Phe Thr Ile Leu Leu Leu Leu Leu Val Ala Ala Ser Leu Leu 165 170 175

Ala Trp Arg Met Met Lys Tyr Gln Gln Lys Gly Glu Arg Thr Trp Val 180 185 190

Leu Gln Pro Leu Glu Gly Asp Leu Cys Tyr Ala Asp Leu Thr Leu Gln
195 200 205

Leu Ala Gly Thr Ser Pro Gln Lys Ala Thr Thr Lys Leu Ser Ser Ala 210 215 220

Gln Val Asp Gln Val Glu Val Glu Tyr Val Ala Ala Gly Met Ser Pro 225 230 235 240

Glu Gln Thr Met Ala Ser Leu Pro Lys Glu Asp Ile Ser Tyr Ala Ser 245 250 255

Leu Thr Leu Gly Ala Glu Asp Gln Glu Pro Thr Tyr Cys Asn Met Gly 260 265 270

His Leu Ser Ser His Leu Pro Gly Arg Gly Pro Glu Glu Pro Thr Glu 275 280 285

Tyr Ser Thr Ile Ser Arg Pro 290 295